

WE CLAIM

1. An ink distribution assembly for a page width ink jet printhead in the form of at least one printhead chip having sets of ink inlet openings, each set having at least one inlet opening for receiving an ink of a particular color to be supplied to the printhead chip, the assembly comprising

a carrier having an elongate structure with a printhead side that is engageable with the printhead and an opposed ink supply side, and defining feed openings through the carrier to be in fluid communication with respective ink inlet openings of the printhead, the ink supply side of the carrier defining a number of discrete feed formations, each feed formation being configured to receive ink of a particular color and to be in fluid communication with the, or each, inlet opening of a respective set, via the feed openings, and the printhead side of the carrier defining at least one ink supply formation, the carrier defining at least one passage in fluid communication between the, or each, ink supply formation and at least one of the feed formations; and

a cover that is engageable with the carrier at the ink supply side, the cover and the ink supply side of the carrier being shaped so that, when the cover is in position, the cover serves to define a roof for the feed formations and so that the cover and the ink supply side of the carrier define ink pathways that are in fluid communication with respective feed formations, one of the carrier and the cover defining ink supply openings in fluid communication with respective ink pathways.

2. An ink distribution assembly as claimed in claim 1, in which at least the carrier is a product of an injection molding process.

3. An ink distribution assembly as claimed in claim 2, in which at least the carrier is of a plastics material.

4. An ink distribution assembly as claimed in claim 1, in which the carrier has a generally planar central portion and a pair of opposed sidewall portions so that the central portion and the sidewall portions define a region in which the cover is received.

5. An ink distribution assembly as claimed in claim 1, in which the printhead side of

the carrier defines a longitudinal recess, the printhead being received in the recess.

6. An ink distribution assembly as claimed in claim 1, in which the carrier defines a plurality of the feed openings so that each feed opening corresponds with a respective ink inlet opening of the printhead.

7. An ink distribution assembly as claimed in claim 6, in which each feed formation includes a plurality of ink feed channels each ink feed channel being in fluid communication with at least one respective feed opening, each ink pathway being in fluid communication with the ink feed channels of its corresponding feed formation.

8. An ink distribution assembly as claimed in claim 7, in which the carrier defines three sets of feed openings, each set of feed openings corresponding with a set of ink inlet openings of the printhead so that three differently colored inks can be supplied to the printhead.

9. An ink distribution assembly as claimed in claim 8, in which the printhead side of the carrier defines a pair of ink supply formations in the form of ink supply channels, one on each side of the longitudinal recess.

10. An ink distribution assembly as claimed in claim 9, in which a pair of longitudinally extending walls are positioned on the carrier to define a longitudinally extending channel in which one set of the feed openings are positioned, a row of spaced, laterally extending walls being positioned on each side of the longitudinally extending walls, so that the laterally extending walls define rows of the ink feed channels terminating at the longitudinally extending walls, a feed opening being positioned in each of the ink feed channels at the longitudinally extending walls, each lateral wall defining a passage from one of the ink supply channels on the printhead side of the carrier to the longitudinally extending channel.

11. An ink distribution assembly as claimed in claim 9, in which the carrier defines a pair of ink supply passages, one in fluid communication with each ink supply channel, one of the ink pathways extending between one of the ink supply openings and the ink supply

channels.

12. An ink distribution assembly as claimed in claim 10, in which the side wall portions and the cover are shaped so that an ink flow pathway is defined between the cover and each of the side wall portions, each ink flow pathway being in fluid communication with a respective row of ink feed channels.

13. A molded component for an ink distribution assembly for a page width ink jet printhead in the form of at least one printhead chip having sets of ink inlet openings, each set having at least one inlet opening for receiving an ink of a particular color to be supplied to the printhead chip, the molded component comprising

a carrier having an elongate structure with a printhead side that is engageable with the printhead and an opposed ink supply side, and defining feed openings through the carrier to be in fluid communication with respective ink inlet openings of the printhead, the ink supply side of the carrier defining a number of discrete feed formations, each feed formation being configured to receive ink of a particular color and to be in fluid communication with the, or each, inlet opening of a respective set, via the feed openings, and the printhead side of the carrier defining at least one ink supply formation, the carrier defining at least one passage in fluid communication between the, or each, ink supply formation and at least one of the feed formations.

14. A page width printing device, which comprises

a page width ink jet printhead in the form of at least one printhead chip having sets of ink inlet openings, each set having at least one inlet opening for receiving an ink of a particular color to be supplied to the printhead chip;

a carrier having an elongate structure with a printhead side that is engageable with the printhead and an opposed ink supply side, and defining feed openings through the carrier to be in fluid communication with respective ink inlet openings of the printhead, the ink supply side of the carrier defining a number of discrete feed formations, each feed formation being configured to receive ink of a particular color and to be in fluid communication with the, or each, inlet opening of a respective set, via the feed openings, and the printhead side of the carrier defining at least one ink supply formation, the carrier defining at least one passage in fluid communication between the, or each, ink supply

formation and at least one of the feed formations; and

a cover that is engageable with the carrier at the ink supply side, the cover and the ink supply side of the carrier being shaped so that, when the cover is in position, the cover serves to define a roof for the feed formations and so that the cover and the ink supply side
5 of the carrier define ink pathways that are in fluid communication with respective feed formations, one of the carrier and the cover defining ink supply openings in fluid communication with respective ink pathways.